

# ABSTRACT OF THE DISCLOSURE

In a deposited-film formation apparatus or process having the means or steps of evacuating the inside of an inside-evacuatable chamber through an evacuation piping by an evacuation means, feeding a material gas into the chamber while evacuating the inside of the chamber, and applying a high-frequency power to form a deposited film on a substrate disposed inside the chamber, a leak is detected on the basis of a measured value of a temperature sensor which detects the heat of reaction that is generated when the material gas fed into the chamber reacts with oxygen contained in air having entered from the outside, so as to be able to stop the material gas feeding.

15 In deposited-film formation apparatus or processes making use of spontaneously ignitable gases, the leak can quickly be detected when air enters the chamber because of any unexpected accident such as a break of piping.